

Claims

1. A releasable locking device comprising

(a) a housing, which housing has a lateral wall, an outer end, and an inner end, which housing has an end wall closing the outer end, and which housing is open at the inner end, the lateral wall having an elongate slot,

(b) a locking pin, which locking pin has a internal portion movable inside and along the lateral wall of the housing, which locking pin has a locking portion, which locking pin is movable between a retracted position wherein the internal portion of the locking pin is spaced from the end wall of the housing by a comparatively lesser distance and an extended position wherein the locking portion of the locking pin extends from the inner end of the housing and wherein the internal portion of the locking pin is spaced from the end wall of the housing by a comparatively greater distance, and which locking pin is biased toward the extended position, and

(c) an outer sleeve, which outer sleeve is movable outside and along the lateral wall of the housing and which outer sleeve is connected to the locking pin via a connecting pin extending from the locking pin, through the elongate slot, the outer sleeve being connected to an end of the connecting pin.

2. The releasable locking device of claim 1 wherein the elongate slot is one of two parallel slots, each slot being located on an opposite side of the lateral wall of the housing, the connecting pin extending through the locking pin, through each slot, and being connected to the outer sleeve at each end of the connecting pin.

3. The releasable locking device of claim 1 wherein the elongate slot has two closed ends, which limit movement of the locking pin between the retracted and extended positions.

4. The releasable locking device of claim 3 wherein the elongate slot is one of two parallel slots, each slot being located on an opposite side of the lateral wall

of the housing, the connecting pin extending through the locking pin, through each slot, and being connected to the outer sleeve at each end of the connecting pin.

5. A storage rack comprising

5 (a) a column having a vertical array of fastener-receiving apertures, each aperture having an upper region and a lower region and each aperture having an inner margin,

10 (b) a beam having an end flange, to which plural fasteners are mounted, each fastener having a distal portion adapted to be inserted into the upper region of an associated one of the fastener-receiving apertures and to overhang the inner margin of the same one of the fastener-receiving apertures, at the lower region of the associated one of said apertures, so as to prevent the distal portion from being withdrawn unless and until the distal portion is elevated, and

15 (c) the releasable locking device of any one of claims 1 through 8, the housing being mounted to the end flange and opening at the inner end of the housing to a hole in the end flange, the hole being aligned with the upper region of a selected one of the fastener-receiving apertures, whereby, in the extended position, the locking pin extends through the hole in the end flange, into the upper region aligned with the hole.

6. A storage rack comprising

20 (a) a column having a vertical array of fastener-receiving apertures, each aperture having an upper region and a lower region and each having an inner margin,

25 (b) a beam having an end flange, to which plural fasteners are mounted, each fastener having a distal portion adapted to be inserted into the upper region of an associated one of the fastener-receiving apertures and to overhang the inner margin of the same one of the fastener-receiving apertures, at the lower region of

the associated one of said apertures, so as to prevent the distal portion from being withdrawn unless and until the distal portion is elevated, and

5 (c) the releasable locking device of any one of claims 1 through 8, the housing being mounted to the end flange and opening at the inner end of the housing to a hole in the end flange, the hole being aligned with the upper region of a selected one of the fastener-receiving apertures associated with the fasteners, whereby, in the extended position, the locking portion of the locking pin extends through the hole in the end flange, into the upper region aligned with the hole in the end flange and whereby, in the retracted position, the locking portion of the
10 locking pin does not extend into the upper region aligned with the hole in the end flange.